Material and Methods: An open label, non-comparative, multicentric, post marketing observational study was conducted in >18 years of patients with ST elevated myocardial infarction (STEMI) receiving Retelex. All patients received 20 units Retelex within 6 hours after the onset of acute myocardial infarction (AMI) symptoms. The dose was given as two 10 unit Intravenous injections each over two minutes 30 minutes apart.
Evaluation criteria: Patients were followed on day 1, 3, 5/7 and 30. The primary evaluation criteria was total number of patients showing clinically successful thrombolysis based on 50% resolution of ST-elevation in the maximum affected (adjacent) leads within 90–120 minutes of initiation of Reteplase and resolution of chest pain. Secondary evaluation criteria included LV function by 2D echo after 24 hrs and within 7 days after thrombolysis, percentage of patient requiring rescue PCI, percentage of patient underwent angioplasty or CABG after thrombolysis. Door to needle time was also recorded in patients receiving the study drug. Global assessment of efficacy and safety was done by patient as well as investigator. All adverse events were recorded for safety assessment.
Results: A total of 228 patients were enrolled out of which 140 were having diabetes mellitus. Out of all patients, 68.9% had ST elevated anterior wall myocardial infarction. Resolution of 50% of ST elevation and resolution of chest pain was reported in 90.50% and 95.4% patients respectively.). No significant difference was seen in primary efficacy variables between diabetes versus non-diabetes patients ($p = 0.1538$ for 50% ST elevation resolution, $p = 0.4031$ resolution of chest pain). The mean LV function by 2 D echo after 24 hours and within 7 days after thrombolysis was 46.79 (+9.33). Rescue PCI was required by 7.6 % patients while angioplasty and CABG was done in 22% and 16.8% patients respectively. No significant difference was seen in diabetes versus non-diabetes patients requiring rescue PCI ($p = 0.1059$), angioplasty ($p = 0.2172$) and CABG ($p = 0.9128$). The incidence of adverse event in this study was 5.3%.
Conclusion: Reteplase IV Injection-recombinant plasminogen activator is effective and well tolerated in the management of ST elevated myocardial infarction (STEMI) in Indian patients including diabetes patients.

Incidence and pattern of hypothyroidism in patients with ischemic heart disease among Indian population

Muneer Abdul Rahaman, G. Vijayaraghavan,
Suman Omana Soman, Kalyagin Alexey Nicolaevich

Kerala Institute of Medical Sciences, Trivandrum, India
Irkutsk State Medical University, Irkutsk, Russian Federation

Background: The association between overt hypothyroidism and coronary artery disease has been often observed in many studies. Less evident is the data on asymptomatic hypothyroidism without clinical manifestations and with mild elevation of thyroid stimulating hormone.
Methods: It is a prospective observational study of about 1200 patients with Ischemic heart disease. 240(20%) patients were observed to have Hypothyroidism. Consecutive 75 (31.25%) patients with hypothyroidism and ischemic heart disease was analyzed for the present study.
Results: Incidence of Hypothyroid patients among 1200 Ischemic Heart Disease patients who were admitted in our centre during a period of 18 months from 1st August 2012 after satisfying the exclusion criteria was 75(6.25%) 31 males & 24 females. Newly detected cases of hypothyroidism was 22(29.3%)13 males & 9 females, of which 12 patients was diagnosed as subclinical hypothyroidism and was initiated treatment and self reported cases of Hypothyroidism was 53(70.6%) 27 males & 26 females.

Out of the 22 newly reported cases of Hypothyroidism 14(63.6%) patients had elevated levels of total cholesterol(>200 mg/dL), LDL(>150), HDL(<40 mg/dL, triglycerides(>150mg/dL) for which statin therapy was initiated and 5 (22.7%) patients was on statin therapy for dyslipidemia with normal levels of lipid profile and with average statin dose of 20 mg daily. 3 patients had normal values of total cholesterol, LDL, HDL, triglycerides.

Site of coronary artery lesion in self reported case of hypothyroidism in ischemic heart disease patients was LAD-32.08%, LCX-26.42%, RCA-15.09%, and others-3.77%. Site of coronary artery lesion in newly detected case of hypothyroidism in ischemic heart disease patients was LAD-40.91%, RCA-22.73, LCX-13.64% and others-4.55%. PTCA was done in 78.7%% of the patient under study, medical management and follow up initiated in 18.7% and CABG in 2.6% patients.
Conclusion: The incidence of hypothyroidism among our study population with ischemic heart disease was 6.25%. In self reported cases of reported cases of Hypothyroidism, 43.4% of patients was on stain therapy for Dyslipidemia and 30.18% patients was diagnosed as new cases of Dyslipidemia. In newly reported cases of hypothyroidism 63.6% patients was diagnosed as new cases of Dyslipidemia. LAD lesion(44%) was dominating in both self reported and newly detected cases of hypothyroidism with ischemic heart disease.

Mean platelet volume and cardiovascular outcomes in acute myocardial infarction- A prospective cohort study

M.P. Ranjith, K.F. Rajesh, Biju George, M.N. Krishnan

Government Medical College, Kozhikode, Kerala, India

Background: High levels of mean platelet volume (MPV) may be associated with adverse outcomes in patients with myocardial infarction (MI). We examined the association between MPV and the risk of death and adverse cardiovascular outcomes in patients with MI.
Methods: We studied consecutive patients with MI admitted to a tertiary care hospital during a period of 1year. MPV was measured at admission and at third month. Patients were followed-up for one-year primary composite outcome of cardiovascular death, stroke, fatal or nonfatal MI and cardiac failure. Patients were classified according to tertile of baseline MPV.
Results: A total of 1206 MI patients, including 934 males (77.4%) and 272 females (22.6%) were studied. The mean age of the study population was 55.93 ± 11.07 years. At one-year follow-up, 292 (28.57%) primary outcome occurred: cardiovascular mortality 78 (7.6%), fatal or nonfatal MI 153 (15.0%), stroke 30 (2.9%), and cardiac failure 128 (12.52%). Highest tertile MPV patients had higher primary outcome as compared with those with MPV in the lowest tertile (adjusted OR = 1.70; 95% CI: 1.18 to 2.45; $p = 0.01$). Total mortality was also more in high MPV group (adjusted OR 2.83; 95% CI: 1.49 to 5.35; $p < 0.001$). There were no significant changes in mean MPV values at admission from those at third month interval (9.15 ± 0.99 Vs 9.19 ± 0.94; $p = 0.2$).

Conclusions: Elevated MPV is associated with worse outcome in patients with acute MI. Elevated MPV in these patients may be due to inherently large platelets.

Fluoroscopically visible calcium and severity of coronary artery disease – A correlation

R. Ashwin Lysander, Dhanapal, Bharani Kumar

Mahatma Gandhi Medical College and Research Institute, India

Background: Coronary artery calcification leads to reduced vascular compliance, abnormal vasomotor responses, and impaired myocardial perfusion. The presence of coronary artery calcification is associated with worse outcomes in patients undergoing revascularization.
Methods: We prospectively analysed the coronary angiograms and clinical profiles of all patients who underwent coronary angiogram which showed fluoroscopically visible calcification. Various parameters such as age, sex, hypertension, diabetes, cholesterol levels, smoking, presence of fluoroscopically visible calcium and severity of coronary artery disease were analysed. A total of 100 patients were studied.
Results: The average age of the patients was 64 years. 70% of the patients had diabetes mellitus and 70% of the patients were hypertensive. 30% of the patients had, anterior wall myocardial infarction, another 30 % of them had inferior wall myocardial infarction, and another 30% of them presented with unstable angina. 10% of the patients had NSTEMI. 87% of the patients studied had dyslipidemia. Angiographically, 65% of the patients with fluoroscopically visible calcium had double vessel disease and 28% had triple vessel disease. 7% had no hemodynamically significant flow limiting lesion. 93% of the patients had fluoroscopically visible calcium in the proximal Left anterior descending artery (LAD). Additionally 20% of the patients had fluroscopically visible calcium in the proximal RCA and 10 % had fluroscopically visible calcium in the left main coronary artery (LMCA).
Conclusion: It is interesting to note that all the patients with fluoroscopically visible calcium either had double vessel disease or triple vessel disease and none of them had single vessel disease. This correlates well with the fact that fluoroscopically visible calcium is a marker of severe coronary artery disease. To conclude fluroscopically visible calcium correlates well with angiographic coronary artery disease severity.

Clinical and angiographic correlation of chest pain with right bundle branch block

Ravi, S.V. Patted, Prabhu Halkati

JNMC, India

Background: Association of coronary artery disease & left bundle branch block is studied extensively. But there are few studies with right bundle branch block association with coronary artery disease. Hence, this study is done to know clinical and angiographic correlation of chest pain associated right bundle branch block.
Aims and objectives: Clinical and angiographic correlation of chest pain with right bundle branch block.
Materials and Methods: This is prospective study conducted in our hospital. It is one year study conducted from Jan 2013 still undergoing. Total 30 patients enrolled till date.
Results: Out of 30 cases 26 were males and 4 were females. Most patients were in age group 50–70 years. Presentations like atypical chest pain in 2, 13 patients had myocardial infarction, 2 had stable angina, 12 had unstable angina. In myocardial infarction group 11 had anterior wall myocardial infarction, one had inferior wall myocardial infarction and another patient had posterior wall myocardial infarction. At presentation 19 patients presented with breathlessness 2 patients were tread mill test positive, one had palpitations. 13 patients had normal CKMB and 17 had raised CKMB, 11 had normal Trop I and 19 had raised Trop I, 11 patients had dyslipidaemia, 7 patients had mild LV dysfunction, 7 had moderate LV dysfunction, one had severe LV dysfunction, 15 had normal LV function. Coronary angiography revealed one had left main disease, 15 had LAD lesion,6 had LCX lesion, and 8 had RCA lesion.
Conclusion: We concluded that ischaemic heart disease patient with RBBB definitely had significant coronary artery disease and also atypical chest pain with normal cardiac enzymes also found to be having significant coronary artery disease.

Prediction of coronary artery disease severity using CHADS2, CHA2DS2-VASC scores and a newly defined CHA2DS2-VASC-HS and CHA2DS2-VASC-HSF scores

Ranjan Modi, S.V. Patted, P.C. Halkati

KLES University and MRC, Belgaum, India

Background: Coronary artery disease (CAD) is the leading cause of morbidity and mortality in the present world. Risk factor assessment, prevention and treatment of CAD is an important aspect of present day research. CHADS2 and CHA2DS2-VASc scores have been previously used for assessing prognostic risk of thromboembolism in non valvular atrial fibrillation patients. They include similar risk factors for the development of coronary artery disease (CAD) and may provide crucial information regarding the severity of coronary artery lesions. To increase the likelihood of determining CAD severity, the CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF score comprising of hyperlipidemia, smoking and family history respectively in addition to the components of the CHA2DS2-VASc score and male instead of female gender. The aim was to investigate whether these risk scores can be used to predict CAD severity.
Methods and Results: A total of 1120 consecutive patients who underwent coronary angiography were enrolled in the study. Presence of >50% stenosis in a coronary artery was assessed as significant CAD. Of the patients, 239 had normal coronary angiograms and served as group 1. The remaining 881 patients with coronary stenosis were further classified into 2 groups according to CAD with stenosis of <50% or > 50%: 338 patients with mild CAD as group 2 and 543 patients with severe CAD as group 3. The CHADS2, CHA2DS2-VASc, CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF scores were significantly different among the 3 groups. All the four scores correlated significantly with the number of diseased and the Gensini score. The CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF score was found to be the best scoring scheme to predict CAD severity in the area under the curve comparison of these scoring systems.